2.111J/18.435J Quantum Computation

http://web.mit.edu/2.111/www/

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Lecture: Tuesday, Thursday, 1-2:30, 2-142

Weekly problem sets; 1 Quiz; Final

Syllabus (number of lectures, dates):

Introduction (1) 9/6
Classical logic (1) 9/11
Introduction to quantum mechanics (4) 9/13 9/18 9/20 9/25
Quantum weirdness (1) 9/27
Teleportation and superdense coding (1) 10/2
Quantum algorithms (5) 10/4 10/11 10/16 10/18 10/23
Quiz 10/25
Quantum Walks (2) 10/30 11/1
Adiabatic (2) 11/6 11/8
Electromagnetic resonance (2) 11/13 11/15
Jaynes-Cummings (2) 11/20 11/27
Noise and error correction (3) 11/29 12/4 12/6
Quantum cryptography (1) 12/11
Final

Text: *Quantum computation and quantum information*, M. Nielsen and I. Chuang, Cambridge University Press.